

Claim listing

Please enter the following new claim 97 to the claim listing, and enter the following amendments. This claim listing replaces all prior claim listings.

1 - 82 (Canceled)

83. (Currently Amended) The method of claim ~~92~~ 100, wherein the encoding of the beads is with color.

84. (Currently Amended) The method of claim ~~92~~ 100 wherein the polymer formed by polymerization is hydrophilic.

85. (Currently Amended) The method of claim ~~92~~ 100, wherein the biomolecules are ligands or receptors.

86. (Previously Presented) The method of claim 85, wherein ligands are peptides, proteins, nucleic acids (including DNA and RNA) or oligonucleotides.

87. (canceled)

88. (Currently Amended) The polymer-bead assembly of claim ~~93~~ 100, wherein one of the ~~substrate the opposed planar surfaces~~ is the surface of a silicon chip.

89. (Currently Amended) The method of claim ~~92~~ 100, wherein the beads have an average diameter of 0.5 um to 100 um.

90. (Canceled)

91. (Currently Amended) The method of claim ~~92~~ 100, wherein the beads include magnetic beads.

92. (Canceled)

93. (Canceled)

94. (Currently Amended) The method of claim ~~92~~ 100, wherein the separation of the opposing planar surfaces defines the thickness of the gel embedded bead assembly.

95. (Currently Amended) The method of claim ~~92~~ 100, wherein the polymer formed by polymerization is permeable to macromolecules.

96. (Currently Amended) The method of claim ~~93~~ 100, wherein the gel embedded bead assembly formed through polymerization is self-supporting and can be removed from the substrate.

97-99 (Canceled)

100. (Newly Added) A method of forming an assembly of encoded beads embedded in a gel securing the encoded beads in recesses in a planar surface, wherein the encoded beads in the assembly are encoded with different labels, and wherein differently labeled beads have different biomolecules displayed on their surfaces and the labeling indicates the type of biomolecule displayed on particular beads and the type of analyte said biomolecule is capable of binding with, the method comprising:

providing a polymerization mixture including the encoded beads and polymerizable components;

confining the polymerization mixture between two opposing planar surfaces wherein one of the two opposing planar surfaces has recesses which can accommodate the encoded beads; and

triggering polymerization of the polymerizable components to thereby form the gel, and thereby embed the beads securely in the recesses.

101. (Newly Added) The method of claim 100, wherein one of the opposed planar surfaces is the surface of an ITO electrode.